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No. 8

Dr. J. W. L. GLAISHER, M.A., F.R.S., PRESIDENT, in the Chair.

Henry Bridger Adames, 5 West Street, Chichester, Sussex, was balloted for and duly elected a Fellow of the Society.

The following Candidate was proposed for election as a Fellow of the Society, the name of the proposer from personal knowledge being appended :—

George McKenzie Knight, 27 King Henry's Road, South Hampstead, N.W. (proposed by Walter E. Besley).

Seventy-eight presents were announced as having been received since the last meeting, including amongst others :—

G. Bigourdan, *Sur la prédiction des occultations des étoiles par la Lune &c.* ; G. Bigourdan, *Observations des nébuleuses et d'amas stellaires*, 2 vols., presented by the author ; A. G. Pingré, *Annales célestes du dix-septième siècle*, publié par G. Bigourdan, presented by the editor ; Preliminary report of the Dutch expedition to Sumatra for the observation of the total solar eclipse of 1901 May, and report of the Dutch observations, No. 12, presented by the Dutch Eclipse Committee ; Royal Society catalogue of scientific papers, 1800–1883, supplementary volume, presented by the Society ; Solar Physics Observatory, catalogue of 470 of the brighter stars classified according to their chemistry, presented by the Observatory ; W. F. Wislicenus, *Astronomischer Jahresbericht*, 1901, presented by the author.

P P

Comparison of Groombridge's and Struve's Right Ascensions of close Circumpolar Stars. By W. G. Thackeray.

(Communicated by the Astronomer Royal.)

How general was the idea that Groombridge's meridian mark was in error is clear from the positive statements made by Dr. Gould in his papers "On the Mean Places of forty-eight Circumpolar Stars," *Astronomical Journal*, Nos. 121, 122, and 130. On p. 1, No. 121, vol. vi., he remarks: "Since there can be no doubt that Groombridge's meridian mark was in error about $2\frac{1}{2}''$," and again on p. 10, No. 122: "right ascensions which, despite the skill and zeal of Piazzini and Groombridge, were referred to erroneous meridian marks." The basis of these positive assertions were the results of the comparison of Struve's and Argelander's observations with those of Groombridge made by Fedorenko and Struve, and which are

$$\text{Argelander-Groombridge} = +0^s.154 + 0^s.188 \tan \delta$$

(Fedorenko, p. 8).

$$\text{Struve-Groombridge} = +0^s.036 + 0^s.130 \tan \delta$$

(Pos. Med. p. cxxviii).

It was Prof. Safford who first (*Monthly Notices*, xlvii. 2, pp. 37-42) sounded a note of doubt on the subject. Dividing the stars common to Struve's and Groombridge's catalogue in four zones he showed that the resulting differences varying but little with the declination, are subject to rather large casual errors, and concluded that "there is but little doubt that the main cause of the discrepancy is instrumental error," and further remarked that "Groombridge's meridian mark was rather too near—about half-mile off—and a previous investigation of Maskelyne's and Pond's observations has shown me that a polar deviation of $\pm 1''$ is not altogether to be avoided when the instrument is adjusted to the meridian from time to time and left for days to its own motions without allowing for azimuth and level error in the modern fashion."

The results of the new reduction of Groombridge's observations for all observations made up to the end of 1810 engrafted on Prof. Safford's paper in the form of corrections conclusively show how right Prof. Safford was in his deductions, and that there is no evidence to support the contention that Groombridge's mark was out of the meridian.

Columns 3 and 4 give respectively the old catalogue and newly reduced place of Groombridge's observations, column 5 the corrections to the old catalogue place, and column 7 the corrected discordance between Struve and Groombridge.

The deduced results of the discussion compare as follows:—